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1878. Let this most venerable and time-honored Society err, if there be error, rather on the side of courtesy, than sanction in the slightest degree indecent struggles for priority in giving names to but partially recognized and vaguely studied objects.

The Secretaries reported the following form of advertisement ordered by the Society :

"The American Philosophical Society hereby offer a premium of five hundred dollars for the best successful process by which Anthracite Coal Dust may be economically utilized, the said premium to be competed for and awarded after due examination and report by a Committee appointed for the purpose. Applicants for this premium are requested to file with this Society, within three months, the proofs : 1st of the originality of their inventions, and 2d, of the successful practical working of these inventions. All applications to be sent to the Hall of the A. P. S., 104 South Fifth street, Philadelphia."

"J. P. LESLEY."

This advertisement was, on motion of Mr. Price, adopted and ordered to be published once a week for four weeks in the *Scientific American*.

On motion of Mr. Price it was

Resolved, That 1000 extra copies of the address on Sylviculture be printed for distribution, out of the Michaux income.

On motion of Mr. Price it was

Resolved, That \$40 be appropriated out of the Michaux income to purchase a copy of Michaux & Nuttall's *American Sylva* for Fairmount Park Library to be presented to the Commissioners of Fairmount Park for the use of the Landscape Gardener.

And the meeting was adjourned.

Stated Meeting, December 21, 1877.

Present, 18 members.

Vice-President, MR. FRALEY, in the Chair.

Mr. H. Phillips, Jr., a newly elected member, was introduced to the presiding officer and took his seat.

Letters of acknowledgment were received from the Vienna Geographical Society, Nov. 22 (97); Physical Society at Geneva, Sept. 15 (96, 97, 98); Central Bureau of

Statistics, Stockholm, Sept. 24 (96-99); and Prof. Rokitsansky.

Letters of envoy were received from the Verein für Erdkunde, at Halle an der Saale, Nov. 18, asking for exchanges. On motion this Society was placed on the list of correspondents to receive the Proceedings.

Also from the Physical Society at Geneva, Sept. 15; Central Bureau of Statistics, Stockholm, Sept. 24; Meteorological Office, London; and the U. S. Coast Survey.

A letter was received from the Royal Institution, G. B., Albemarle street, London, Nov. 22, acknowledging the receipt of Proc., No. 88, and asking for the completion of their sets of Proceedings and Transactions of the A. P. S., which on motion was granted (Proc. 69, and Trans. N. S. Vols. III to XI, inclusive, and XIV, ii).

The report of the Secretaries on Prof. Frazer's resolutions made at the last meeting, was on motion, concurred in.

Prof. Prime read a paper "On the Palæozoic Rocks of Lehigh and Northampton counties, Pa." See page 248.

Prof. Frazer followed with remarks on similar rocks in his district of York and Adams counties, and exhibited some artificial brown hematite iron ore in the form of a precipitate from pyrites.

Mr. Lesley exhibited, in illustration of one of the subjects of Prof. Prime's paper, some fine crystals of calcite enclosed in shells of brown hematite, obtained by Mr. Joseph Revere, of Canton, Mass., from a magnesian limestone cave back of St. Genevieve, below St. Louis, Missouri.

Mr. Blasius read his postponed paper on Modern Meteorological Method; and referred to another on certain meteorological facts and problems discussed by him at meetings of this Society.

Mr. Blasius called attention to the gradual adoption of his views by prominent meteorologists without proper acknowledgment of their indebtedness. Some of those views were promulgated as long ago as 1851. He had taken especial pains to publish them and to circulate them by private correspondence with other workers in this field of research, so that there seemed to be no excuse for any attempt to withhold the recognition which

is his just due. He had repeatedly pointed out defects in the present prevailing methods of weather-study. Recent papers in scientific journals and discussions before learned bodies had shown that the same investigator could draw entirely opposite conclusions from the same set of observations.

His reclamation was meant to cover the frequent effect of rain in increasing the force of storms; the influence of the uneven distribution of heat, both in vertical and lateral directions; the mingling of cold and warm air through the alternate encroachment of polar and equatorial currents, the former passing under, or the latter flowing over its antagonist; the consequent occurrence of high barometer storms as well as of low barometer storms; and the fact that the areas of both high and low barometer are parts of the same storm.

He had aroused the attention of meteorologists to the fact that dangerous storms not only might be both preceded and followed by rain, but might be wholly unaccompanied with rain; and these new views had entirely changed the character of the published official and unofficial weather reports and predictions; but he especially insisted on the fact that the methods of observation and correlation in regard to storms, employed by professional meteorologists were still so defective that any hypothesis whatever could be constructed from the present weather charts, at the will or fancy of a meteorologist who had no better resource of his own in the shape of facts of his own observing.

Dr. Sadtler read by title two papers entitled, "A new method for the decomposition of chromic iron," and "Precipitation of copper and sodium carbonate." By Edgar T. Smith, Ph. D., Assistant in Analytical Chemistry, University of Pennsylvania. Being contributions from the Laboratory of the University of Pennsylvania, No. XII. See page 216.

Mr. Lesley exhibited a diagram of the railway cutting, opposite Harrisburg, in Cumberland County, showing the altitude and order of forty-six (46) consecutive layers of the Magnesian Limestone Formation, No. II (calciferous auroral, or siluro cambrian); and a colored diagram of the analysis of said beds, made by Mr. Joseph Hartshorne, in the Laboratory of the Second Geological Survey at Harrisburg, exhibiting a remarkable regular alternation of magnesian and non-magnesian layers, with maxima of insoluble matters corresponding with the maxima of carbonate of magnesia. See page 260.

Prof. Cope displayed life size drawings of vertebræ, femoral and other bones of gigantic fossil saurians of the genera La-

marasaurus, and Amplicœlias (*Camarasaurus supremus*, *Amplicœlias altus*, and *A. latus*), and gave their detailed descriptions in a paper entitled :

“On the Vertebrata of the Dakota epoch of Colorado. By E. D. Cope,” with two others: viz. (see page 193).

“Descriptions of New Vertebrata from the Upper Tertiary formations of the West. By E. D. Cope ;” (see page 219).

“On some saurians found in the Triassic of Pennsylvania by C. M. Wheatly. By E. D. Cope ;” (see page 231).

Prof. Frazer exhibited two framed plaster casts of the Arms of Lord Baltimore, restored from half destroyed sculptures on the mile stones of Mason & Dixon’s boundary line between the States of Pennsylvania and Maryland.

The Report of the Finance Committee was read and the recommendations contained therein adopted.

On the recommendation of the Finance Committee in their report, the following resolution was adopted, viz :

Resolved, That the Committee of Finance be authorized and directed to take the needful steps for the sale of the French rentes now held as an investment for the Michaux Legacy and when the proceeds are received into the treasury to make an investment thereof here in such securities as are designated by law for the investment of trust funds.

Pending nominations 840 to 850, and new nominations 851, were read.

And the meeting was adjourned.

NOTE TO PAGE 270.—Prof. Stevenson in a private letter dated January 15, 1878, writes that in the Crinoidal Limestone of the Barren Measures *Spirifer planoconvexa* is characteristically abundant, and has the same mode of occurrence in the rock, which *Ambocœlia umbonata* has in the Chemung, but should not be mistaken for it.

ERRATA for Proceedings A. P. S. Vol. XVI. No. 99.

On page 624, line 12, *substitute* “that of the Sun, and the light received from it 75 times that received from A 61 Cygni, we obtain the following relations :” &c.

On page 625, line 25, *for* “fact of” *read* “fact that.”